REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1 and 2 have been amended. New claims 6-10 have been added. Claims 1-10 are pending in this application.

The disclosures stands objected to because of the informalities. In response, Applicant has amended the disclosure according to the Examiner's kind suggestions. It is believed that the disclosure is now in a proper format.

Claim 2 stands objected to because of the informalities. Applicant has amended claim 2 to obviate the objection. Withdrawal of the objection to claim 2 is respectfully requested.

Claims 1-5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. in view of Hawker et al. Applicant traverses the rejection for the following reasons.

The claimed invention recites a step of forming a dual damascene pattern in a low dielectric constant insulating film and a step of performing an annealing process so that a forming agent reacts with the low dielectric constant insulating film to form pores therein, thus making the low dielectric constant insulating film a porous low dielectric constant insulating film, wherein the pores are formed after the damascene pattern is formed, as partially recited in claim 1, as amended. Applicant

submits that Chang et al. and Hawker et al., either alone or in combination, fail to disclose or suggest the above sequential features of the claimed invention.

According to Chang et al., at least one etch is performed to form a dual damascene structure in the porous low-k dielectric layer by the different insulating layers as disclosed in the abstract. In other words, the dual damascene structure is subsequently formed after the porous low-k dielectric layer is formed. In contrast, the annealing process is performed to form the pores after the damascene pattern is formed according to the claimed invention. Because of the difference, Chang et al. could not possibly achieve the purpose of the claimed invention that is to prevent the chemicals used in the step of forming the dual damascene pattern from remaining in the pores of the porous low dielectric constant insulating film.

The Hawker et al. patent, on the other hand, discloses a method of forming a porous polymer material. However Hawker et al. is moot with respect to the damascene process. Therefore, even if Chang et al. and Hawker et al. could be combined in the manner as suggested by the Examiner, these references, as combined, still fail to disclose or suggest the step of performing an annealing process so that the foaming agent reacts with the low dielectric constant insulating film to form pores

therein after the damascene pattern is formed. The Examiner is invited to point out any other passages which disclose or teach the sequential process of forming the pores after the dual damascene pattern is formed.

Therefore, Applicant respectfully submits that claim 1 is not made obvious over Chang et al. in view of Hawker et al. Claims 2-5, which are dependent on claim 1, are patentable for the reasons discussed above with respect to claim 1, as well as on their own merits.

New independent claim 6 recites a step of sequentially performing an annealing process to form pores in a low dielectric constant insulating film after a step of forming a dual damascene pattern in the low dielectric constant insulating film. Accordingly, the same reasons discussed above with regard to claim 1 are applicable to claim 6. Therefore claim 6 and its dependent claims 7-10 are not made obvious over Chang et al. in view of Hawker et al. Under 35 U.S.C. §103(a).

All objections and rejections having been addressed, it is respectfully submitted that claims 1-10 are now in condition for allowance and a notice to that effect is earnestly solicited. If any issues remain to be resolved, the Examiner is cordially invited to telephone the undersigned attorney at the number listed below.

Respectfully submitted,
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